



July 25, 2013

Charles Johnson  
Solid Waste Compliance Assurance Unit  
Hazardous Materials and Waste Management Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South, B-2  
Denver Colorado 80246-1530

Re: 6 CCR 1007-2, Part 1, Part A, General Requirements And Information Concerning All Solid Waste Disposal Sites And Facilities In The State Of Colorado, Sections 1 and 5.5 Management of Regulated Asbestos Contaminated Soil

Thank you for the opportunity to participate in the stakeholder review of the asbestos-related portion of the regulation. As you know, the City and County of Denver has been concerned about the scope and implementation of this regulation for quite some time.

Denver has implemented several city projects where asbestos containing material was found, which was managed in accordance with the regulation. On the basis of that experience, Denver convened a group of others experienced in the field, including real estate experts, banking industry lenders, environmental consultants, and other construction project managers to identify issues and recommend appropriate changes. Unfortunately, that group was unable to accomplish anything more than minor departmental policy changes. Since then, Denver has participated in a larger stakeholder group convened by the Department to consider the need for regulatory change, and to review amendment proposals. Denver has raised the issues discussed below consistently throughout both processes. This group effort has resulted in a proposed regulatory amendment (July 2, 2013) that would substantially change but only *somewhat* improve the current regulation. Denver urges the Department to adopt a more finely tuned approach to the management of asbestos in soil that will allow projects to proceed efficiently in a manner that continues to provide public health and environmental protection. Such an approach will foster, rather than impede, brown field redevelopment.

The proposed amendment is still premised upon the notion that a single fiber of asbestos in the soil must be managed through an extensive (and expensive) set of requirements. The federal Occupational Safety and Health Administration (OSHA), United States Environmental Protection Agency, Colorado legislature in adopting the Clean Air Act have not adopted such a broadly encompassing approach, nor has any other state or country. Rather, other regulatory agencies have established a threshold or take a 'manage as appropriate' risk-based approach to soil containing asbestos/asbestos containing material. The Department's regulation, even as proposed for amendment, is not based upon a scientifically demonstrated level of risk, but instead imposes significant regulatory burden because the risk from exposure to a single fiber is unknown. This is not rational nor is it reasonably related to the harm sought to be avoided.

Similarly, the definition of 'regulated asbestos contaminated soil' is overly broad. It appropriately includes friable asbestos-containing material (with more than 1% asbestos). However, it also contains (as proposed) ACM that has been broken, resized or damaged, or subject to a high probability of releasing fibers. The Agency for Toxic Substances and Disease Registry (ATSDR) has indicated cutting will not cause a significant release<sup>1</sup>; further, 'high probability' raises the specter of an unknowable condition. The department has indicated that use of a front end loader excavating nonfriable ACM, for instance and by itself, makes it a high probability that asbestos fibers will be released; we disagree and there is no scientific support for the department's position. Whether ACM is rendered friable should be the test, namely: "previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure".<sup>2</sup>

Additionally, and perhaps more importantly, soil known to contain non-visible asbestos in *any* amount is regulated; there is no scientific basis for this approach and it requires costly project expenses that are not reasonably related to protection of public health and the public. Denver urges the department to adopt a threshold level of asbestos in soil for regulation. The department has premised its single fiber approach on public health concerns about exposure to asbestos from the Libby Montana experience; these are not germane to Colorado by virtue of the sheer magnitude of the problem at Libby. It is estimated that, in Libby and the neighboring town of Troy from the early 1920's to 1990, asbestos contamination of the air, water and lumber in the area was caused by the release of up to *5000 pounds of asbestos laden dust into the air daily*<sup>3</sup>. By contrast, the primary asbestos in soil concern in Colorado is from asbestos contaminated material presenting as construction and demolition debris.

ATSDR assessed the current community health risk from 28 sites where asbestos was exfoliated<sup>4</sup>. At some of those sites, where pure vermiculite and waste rock (from which the asbestos was mined) was buried, the asbestos contamination in soil reached levels of 12-18%!<sup>5</sup> In its summary report, ATSDR noted that EPA required cleanup for many of those sites, establishing action levels of 1% asbestos in soil.

ATSDR also evaluated the current community health risk from sites where active mining/exfoliating is *not* occurring, which are more comparable to the Colorado situation: "In some cases, community members could be exposed to residual asbestos at a site if they visit a site for legitimate business (as customers or tenants), trespass on a site, or occupy a site after redevelopment (assuming redevelopment does not include assessment and cleanup of residual asbestos as needed). Each of the potential exposure scenarios described above likely would result in low-level, intermittent exposure to asbestos. As mentioned previously in this report, little scientific information is available about the health risks associated with this type of exposure." This may indicate the sufficiency of reasonable asbestos management controls during soil disturbance.

ATSDR also characterized the risk as minimal for releasing asbestos by cutting gypsum boards (also known as drywall or sheetrock) in a work setting, which may also be pertinent to the Colorado

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<sup>1</sup> See note 6, below.

<sup>2</sup> Definition of 'friable', Air Quality Control Commission Regulation 8.

<sup>3</sup> Libby Montana and the Asbestos Story, <http://www.libbymontanaasbestos.com/libby-montana-asbestos-story/>

<sup>4</sup> A milling process to separate asbestos from the mined rock.

<sup>5</sup> Summary Report: Exposure to Asbestos-Containing Vermiculite from Libby, Montana, at 28 Processing Sites in the United States, October 29, 2008 at p. 16, [http://www.atsdr.cdc.gov/asbestos/sites/national\\_map/index.html](http://www.atsdr.cdc.gov/asbestos/sites/national_map/index.html)



situation.<sup>6</sup> This finding tends to minimize the concern for health risks from small surface area cuts/breaks in ACM. The Department has characterized these cuts as necessarily rendering previously non-friable ACM friable because of the 'high probability to release' asbestos fibers.

The second major issue of the proposed amendment is that it contains a level of detail that is typically reserved to the discretion of project managers. Establishing performance standards rather than the day-to-day implementation steps is preferable because it allows the manager to determine how to conduct the project in a cost-effective and timely manner while still providing public health and environmental protection. Presumably this level of regulatory detail was written in response to the objection that the regulators were inappropriately establishing requirements by guidance. Rather than simply writing previous guidance into the form of regulatory requirements, the question should be, 'who/what are we trying to protect and what level/manner of protection should be *required*?' For example, requiring a CABI to exercise independent judgment rather than specifying that a CABI may not be contractually related to the general contractor is preferable; requiring application of a wetting agent in accordance with the manufacturer's recommendation is preferable to specifying "a 50:50 mixture of polyoxyethylene ester and polyoxyethylene ether, or the equivalent, in a 0.16 percent solution (1 ounce to 5 gallons) of water"; an ongoing requirement to maintain an adequately wet condition is preferred instead of requiring inspection every 2 hours. We acknowledge the regulators are trying to reach all audiences to help them understand the requirements (i.e., provide guidance); that can still be done by guidance. The trick is to understand that guidance is not a requirement and that the department is regulating/enforcing, not managing construction projects.

A third objection to the proposed amendment is the department's approach to air monitoring. Although the proposal is less than originally 'required' by guidance, it is still far more than the current regulation requires. There is no scientific basis for the expanded requirement or the associated expense. There is nothing to indicate that, without some threshold indicating a significant release, air monitoring will provide useful information about the effectiveness of the controls. In some cases, the department has clearly overreached; for instance, requiring a second type of laboratory analysis (TEM) on samples that are below detection limits vs. an actual zero fiber count.

We appreciate the department's approach to specifying the requirements for management of asbestos contaminated soils (together with the alternatives for submittal/approval of a site-specific plan or standard operating procedures). An explicit statement that conformance with 5.5.7 (unless an alternative approach is approved) is necessary. Further, the requirements must be stated in such a way as to be ascertainable. For example, work stoppage is required when wind speeds reach a specified velocity, when winds create visible emissions leaving the RWA, or when 'winds interfere with engineering controls'. The last phrase is a subjective statement, made unnecessary by the other subparagraphs. It adds nothing re level of protection but opens the enforcement door to some unknowable expectation of the regulators.

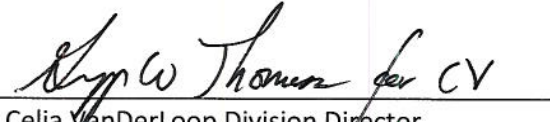
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<sup>6</sup> "In downstream processing, the VC and associated asbestos were entrained in the wet slurry or encased in the gypsum core sandwiched between layers of paper. Some asbestos could have been released into the air when the boards were cut and sized. However, the small surface area of the edge cuts and the low amount of asbestos in the finished product would likely result in minimal asbestos releases into the plant air." *Supra*, at p. 21.

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Finally, the proposed language is sometimes unclear, redundant, and/or internally inconsistent. A set of redlines will be sent to you separately that addresses the issues in greater detail. We hope that the department will find these comments helpful in finalizing its regulatory proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Celia W. VanDerLoop for CV", is written over a horizontal line.

Celia VanDerLoop Division Director  
Denver Department of Environmental Health